

COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Claim 1 (currently amended): A waveform producing method comprising the steps of:
receiving a tone generation instruction that instructs generation of a tone;
receiving style-of-rendition identification information indicative of a style of rendition to be added to the tone to be generated based on the tone generation instruction identifying a style of rendition to be used in a musical performance and corresponding to a waveform to be produced;
reading out wave factor data from a style-of-rendition table based on the received style-of-rendition identification information, said wave factor data including at least vector identification information identifying vector data and time position data corresponding to a time position of the vector data;
generating a packet stream in accordance with the wave factor data read out by said step of reading out style-of-rendition identification information received by said step of receiving, the packet stream including a series of packets, each of the packets including vector identification information that corresponds to the vector identification information in the wave factor data and time information indicative of timing that corresponds to the time position data in the wave factor data and depends on timing of the tone generation instruction; and
reading out, from a storage device, vector data on the basis of the vector identification information included in individual ones of the packets and then sequentially producing a waveform in accordance with the time information included in the individual packets and on the basis of the read-out vector data.

Claim 2 (previously presented): A waveform producing method as claimed in claim 1 wherein said step of producing a waveform includes a step of arranging the individual packets on a time axis on the basis of the time information.

Claim 3 (previously presented): A waveform producing method as claimed in claim 1 wherein said step of producing a waveform includes a step of adjusting the time information and a step of arranging the packets on a time axis on the basis of the time information adjusted by said step of adjusting.

Claim 4 (original): A waveform producing method as claimed in claim 3 wherein said step of adjusting the time information adjusts the time information forward or backward by a predetermined amount.

Claim 5 (original): A waveform producing method as claimed in claim 3 wherein said step of adjusting the time information adjusts the time information forward or backward by a predetermined amount on the basis of a random number.

Claim 6 (previously presented): A waveform producing method as claimed in claim 1 wherein said packet stream includes data for controlling a pitch of a waveform to be produced.

Claim 7 (previously presented): A waveform producing method as claimed in claim 1 wherein said packet stream includes data for controlling an amplitude of a waveform to be produced.

Claim 8 (previously presented): A waveform producing method as claimed in claim 1 wherein said packet stream includes data for controlling a shape of a waveform to be produced.

Claim 9 (currently amended): A waveform producing apparatus comprising:

means for receiving a tone generation instruction that instructs generation of a tone;

means for receiving style-of-rendition identification information indicative of a style of rendition to be added to the tone to be generated based on the tone generation instruction identifying a style of rendition to be used in a musical performance and corresponding to a waveform to be produced;

means for reading out wave factor data from a style-of-rendition table based on the received style-of-rendition identification information, said wave factor data including at least vector identification information identifying vector data and time position data corresponding to a time position of the vector data;

means for generating a packet stream in accordance with the wave factor data read out by said means for reading out style-of-rendition identification information received by said means for receiving, the packet stream including a series of packets, each of the packets including vector identification information that corresponds to the vector identification information in the wave factor data and time information indicative of timing that corresponds to the time position data in the wave factor data and depends on timing of the tone generation instruction; and

means for reading out, from a storage device, vector data on the basis of the vector identification information included in individual ones of the packets and then sequentially producing a waveform in accordance with the time information included in the individual packets and on the basis of the read-out vector data.

Claim 10 (currently amended): A waveform producing apparatus comprising:

a first input device adapted to input a tone generation instruction that instructs a generation of a tone;

a second input device adapted to input, into said waveform producing apparatus, style-of-rendition identification information indicative of a style of rendition to be added to the tone to be generated based on the tone generation instruction identifying a style of rendition to be used in a musical performance and corresponding to a waveform to be produced; and

a processor coupled with said first input device and said second input device and adapted to:

read out wave factor data from a style-of-rendition table based on the received style-of-rendition identification information, said wave factor data including at least vector identification information identifying vector data and time position data corresponding to a time position of the vector data;

generate a packet stream in accordance with the wave factor data read out style-of-rendition identification information inputted via said second input device, the packet stream including a series of packets, each of the packets including vector identification information that corresponds to the vector identification information in the wave factor data and time information indicative of timing that corresponds to the time position data in the wave factor data and depends on timing of the tone generation instruction inputted via said first input device; and

read out, from a storage device, vector data on the basis of the vector identification information included in individual ones of the packets and then sequentially produce a waveform in accordance with the time information included in the individual packets and on the basis of the read-out vector data.

Claim 11 (currently amended): A machine-readable storage medium containing a group of instructions to cause said machine to implement a waveform producing method, said waveform producing method comprising the steps of:

receiving a tone generation instruction that instructs generation of a tone;

receiving style-of-rendition identification information indicative of a style of rendition to be added to the tone to be generated based on the tone generation instruction identifying a style of rendition to be used in a musical performance and corresponding to a waveform to be produced;

reading out wave factor data from a style-of-rendition table based on the received style-of-rendition identification information, said wave factor data including at least vector identification information identifying vector data and time position data corresponding to a time position of the vector data;

generating a packet stream in accordance with the wave factor data read out by said step of reading out style-of-rendition identification information received by said step of receiving, the packet stream including a series of packets, each of the packets including vector identification information that corresponds to the vector identification information in the wave factor data and time information indicative of timing that corresponds to the time position data in the wave factor data and depends on timing of the tone generation instruction; and

reading out, from a storage device, vector data on the basis of the vector identification information included in individual ones of the packets and then sequentially producing a waveform in accordance with the time information included in the individual packets and on the basis of the read-out vector data.

Claim 12 (currently amended): A waveform producing method comprising the steps of:

receiving a packet stream including a plurality of packets, each of the packets including time information of the packet, and vector identification information corresponding to the packet and identifying vector data and adjustment information, said vector identification information extracted from a style-of-rendition table based on a style of rendition to be used in a musical performance for generating a waveform representative of a style of rendition to be used in a musical performance;

reading out, from a storage device storing a plurality of vector data, vector data corresponding to the vector identification information of individual ones of the packets;

modifying the read-out vector data based on a corresponding adjustment information;

arranging, on a time axis, the ~~read-out modified~~ vector data in accordance with the time information of the individual packets; and

producing a waveform on the basis of the vector data arranged on the time axis.

Claim 13 (currently amended): A waveform producing apparatus comprising:

means for supplying a packet stream including a plurality of packets, each of the packets including time information of the packet, and vector identification information corresponding to the packet and identifying vector data and adjustment information, said vector identification information extracted from a style-of-rendition table based on a style of rendition to be used in a musical performance for generating a waveform representative of a style of rendition to be used in a musical performance;

means for reading out, from a storage device storing a plurality of vector data, vector data corresponding to the vector identification information of individual one ones of the packets;

means for modifying the read-out vector data based on a corresponding adjustment information;

means for arranging, on a time axis, the read-out modified vector data in accordance with the time information of the individual packets; and

means for producing a waveform on the basis of the vector data arranged on the time axis.

Claim 14 (currently amended): A waveform producing apparatus comprising:
a processor adapted to:

receive a packet stream including a plurality of packets, each of the packets including time information of the packet, and vector identification information corresponding to the packet and identifying vector data and adjustment information, said vector identification information extracted from a style-of-rendition table based on a style of rendition to be used in a musical performance for generating a waveform representative of a style of rendition to be used in a musical performance;

read out, from a storage device storing a plurality of vector data, vector data corresponding to the vector identification information of individual ~~one~~ ones of the packets;

modify the read-out vector data based on a corresponding adjustment information;

arrange, on a time axis, the ~~read-out modified~~ vector data in accordance with the time information of the individual packets; and

produce a waveform on the basis of the vector data arranged on the time axis.

Claim 15 (currently amended): A machine-readable storage medium containing a group of instructions to cause said machine to implement a waveform producing method, said waveform producing method comprising the steps of:

receiving a packet stream including a plurality of packets, each of the packets including time information of the packet, and vector identification information corresponding to the packet and identifying vector data and adjustment information, said vector identification information extracted from a style-of-rendition table based on a style of rendition to be used in a musical performance for generating a waveform representative of a style of rendition to be used in a musical performance;

reading out, from a storage device storing a plurality of vector data, vector data corresponding to the vector identification information of individual one ones of the packets;

modifying the read-out vector data based on a corresponding adjustment information;

arranging, on a time axis, the read-out modified vector data in accordance with the time information of the individual packets; and

producing a waveform on the basis of the vector data arranged on the time axis.

Claim 16 (currently amended): A waveform producing method as claimed in claim 1, wherein said style-of-rendition identification information represents a style of rendition used in a given portion of the a musical performance.

Claim 17 (previously presented): A waveform producing method as claimed in claim 1, wherein said receiving step further receives a style-of-rendition parameter corresponding to the style-of-rendition identification information, said generating step generates the packet stream in accordance with the style-of-rendition identification information and style-of-rendition parameter and the waveform produced by said producing step has a waveform characteristic corresponding to the style-of-rendition parameter.

Claim 18 (previously presented): A waveform producing method as claimed in claim 1 wherein the packet stream is generated fro each harmonic component and each non-harmonic component.

Claim 19 (new): A waveform producing method comprising the steps of:
receiving a plurality of packet streams, said packet streams being created in correspondence with at least a timbre factor and a pitch factor constituting a tone waveform, each of said packet streams including a plurality of packets, each of the packets including time information of the packet and vector identification information corresponding to the packet and identifying vector data, said vector identification information extracted from a storage device based on a style of rendition to be used in a musical performance;
reading out, from a storage device storing a plurality of vector data, for each of the factors, vector data corresponding to the vector identification information of individual ones of the packets;
arranging, on a time axis, the read-out vector data of the individual factors, in parallel relation to each other, in accordance with the time information of the individual packets; and
producing waveforms of the individual factors in parallel relation to each other, and producing, on the basis of the produced waveforms of the individual factors, a tone waveform with a style of rendition imparted thereto.

Claim 20 (new): A waveform producing apparatus comprising:

a first section that receives a plurality of packet streams, said packet streams being created in correspondence with at least a timbre factor and a pitch factor constituting a tone waveform, each of said packet streams including a plurality of packets, each of the packets including time information of the packet and vector identification information corresponding to the packet and identifying vector data, said vector identification information extracted from a storage device based on a style of rendition to be used in a musical performance;

a second section that reads out, from a storage device storing a plurality of vector data, for each of the factors, vector data corresponding to the vector identification information of individual ones of the packets;

a third section that arranges, on a time axis, the read-out vector data of the individual factors, in parallel relation to each other, in accordance with the time information of the individual packets; and

a fourth section that produces waveforms of the individual factors in parallel relation to each other, and producing, on the basis of the produced waveforms of the individual factors, a tone waveform with a style of rendition imparted thereto.

Claim 21 (new): A machine readable storage medium containing a group of instructions to cause said machine to implement a waveform producing method, said waveform producing method comprising the steps of:

receiving a plurality of packet streams, said packet streams being created in correspondence with at least a timbre factor and a pitch factor constituting a tone waveform, each of said packet streams including a plurality of packets, each of the packets including time information of the packet and vector identification information corresponding to the packet and identifying vector data, said vector identification information extracted from a storage device based on a style of rendition to be used in a musical performance;

reading out, from a storage device storing a plurality of vector data, for each of the factors, vector data corresponding to the vector identification information of individual ones of the packets;

arranging, on a time axis, the read-out vector data of the individual factors, in parallel relation to each other, in accordance with the time information of the individual packets; and

producing waveforms of the individual factors in parallel relation to each other, and producing, on the basis of the produced waveforms of the individual factors, a tone waveform with a style of rendition imparted thereto.